

REMARKS

Claims 2, 4, 5, 7-11 and 14 are pending. Claims 1, 3, 6 and 12-13 have been cancelled.

Claim 2 has been amended to clarify that the range of Mn of 500 to 1,000,000 relates to the P². Support for this amendment can be found in section [1-4] beginning at the last line of page 32.

Claim 4 has been amended for clarity.

New claim 14 lists all of the possible multifunctional low-molecular compounds (K) as recited in claim 4, except that claim 14 does not include an alkyl aluminum.

No new matter has been added by way of the above-amendment.

Issues under 35 U.S.C. § 112, Second Paragraph

Claims 2, 4 and 7-11 are rejected under 35 U.S.C. § 112, second paragraph as being indefinite. Applicants respectfully traverse the rejection.

Specifically, the Examiner objects to the following phrase in claim 2:

"wherein P² is a polar polymer chain having polyolefin side chains (A4) having a number average molecular weight (Mn) of 500 to 1,000,000"

The Examiner asserts that this phrase could be interpreted as referring to "(A4)" or to "P²" and it is therefore unclear whether the molecular weight refers to the polar polymer chain or only the polyolefin side chain. In response, Applicants have amended claim 4 to recite that the range of Mn of 500 to 1,000,000 relates to P².

The Examiner objects to the phrase "*the* polymer having a functional group" as recited in claim 4 in "Process S-1" for lacking antecedent basis. In response, Applicants have amended this phrase by replacing the term "the" with the term "a".

The Examiner objects to the term "(co)polymerizing" in Process S-2 as recited in claim 4. According to convention, the parenthesis "()" indicates that the term "(co)polymerizing" refers to both homopolymerizing and copolymerizing. In response, Applicants have amended claim 4 to recite the term "polymerizing."

In view of the fact that the claims, as currently amended, specifically point out and distinctly claim the subject matter which Applicants regard as the invention, the claims are sufficiently definite to satisfy the requirements of 35 USC 112, second paragraph. As such, reconsideration and withdrawal of the rejection are respectfully requested.

Prior Art based Issues

Claims 4, 5 and 8-11 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ziegler (US 2,699,457).¹ Applicants respectfully traverse the rejection.

The Examiner asserts that Ziegler disclose a material having polyethylene chains bound to aluminum (see column 1, lines 33-45 and column 2, lines 19-25).

The Examiner appears to understand that none of the polymers of Ziegler are formed by process S-1 and S-2, as presently claimed. However, the Examiner asserts that only the product limitations in the inventive product-by-process claims will be given patentable weight until Applicants submit arguments/evidence to convince the Examiner that the process limitations give the product a structural distinction from the product in Ziegler. For example, the Examiner appears to take the position that the product formed by polymerizing olefins using an "activator" as taught by Ziegler gives a product which is identical in structure to the product of inventive

¹ During a telephone conversation on February 3, 2009, between Examiner Mullis and Applicants' representative, Garth M. Dahlen, Ph.D., Esq. (#43,575), Examiner Mullis clarified that he did not intend to include claim 7 in the rejection, since claim 7 depends from claim 2 (which is not under rejection).

process S-1 wherein a polymer having a functional group at the terminal thereof is reacted with the multifunctional low-molecular compound (K).

However, the Examiner appears to misunderstand the structure of the products of Ziegler. The activators of Ziegler cannot each act as a catalyst center for multiple polymers as required by the present claims which recite in general formula (IV) that n' is *an integer of 3 or more*. At most, the aluminum activator of Ziegler will generate and be bound to a single polymer chain.

In view of the structural distinctions between the multi-branched polymer of present claim 4 and the products of Ziegler, a *prima facie* case of anticipation or obviousness cannot be said to exist. As such, reconsideration and withdrawal of the rejection are respectfully requested.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Garth M. Dahlen, Ph.D. Esq. (Reg. No. 43,575) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Application No. 10/797,144
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Docket No.: 1155-0332PUS1

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Dated: February 25, 2009

Respectfully submitted,

By  #43525

Marc S. Weiner

Registration No.: 32,181

BIRCH, STEWART, KOLASCH & BIRCH, LLP

8110 Gatehouse Road

Suite 100 East

P.O. Box 747

Falls Church, Virginia 22040-0747

(703) 205-8000

Attorney for Applicant